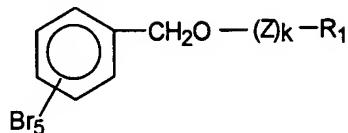


We claim:

1. A pentabromobenzyl alkyl ether of the formula:



wherein:

- Z represents the group -(Y-O)_n-, wherein Y is a linear or branched -(C₂-C₈)alkylene-, preferably -CH₂CH₂- and -CH₂CH(CH₃) - -;
- n represents an integer from 2 to 4;
- k may be 0 or 1;
- R₁ represents hydrogen, a linear or branched -(C₁-C₁₀)alkyl, a linear or branched -(C₂-C₁₀)alkylene-OH, allyl, or 1,2-dibromopropyl;
provided that when k is zero R₁ represents a linear or branched -(C₄-C₁₀)alkyl or a linear or branched -(C₂-C₁₀)alkylene-OH and when k is 1, R₁ represents hydrogen, a linear or branched -(C₁-C₄)alkyl, allyl or 1,2-dibromopropyl.

2. A pentabromobenzyl alkyl ether according to claim 1, wherein Z represents a group selected from -(C₂H₄O)_n and -(C₃H₆O)_n, wherein n represents 2.

3. A pentabromobenzyl alkyl ether according to claim 1, wherein k=1 and R₁ represents H, methyl or butyl.

4. A pentabromobenzyl alkyl ether according to claim 1, wherein k=0 and R₁ represents branched (C₈)alkyl or linear (C₆)alkylene-OH.

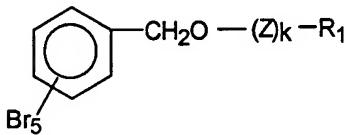
5. A pentabromobenzyl alkyl ether according to claim 1 , selected from the group consisting of:

- (i) pentabromobenzyl-O-CH₂-CH₂OCH₃;
- (ii) pentabromobenzyl-O-CH₂CH₂O(CH₂)₃CH₃;
- (iii) pentabromobenzyl-O-(CH₂CH₂O)₂CH₃;
- (iv) pentabromobenzyl-O-(CH₂CH₂O)₂H;
- (v) pentabromobenzyl-O-(CH₂)₆OH;
- (vi) pentabromobenzyl-O-CH₂CH(C₂H₅)(CH₂)₃CH₃;
- (vii) pentabromobenzyl-O-CH₂CH₂OCH₂CH=CH₂;
- (viii) pentabromobenzyl-O-(C₃H₆O)₂-CH₃
- (ix) pentabromobenzyl-O-(C₃H₆O)₂-H

6. A compound according to any one of claims 1 to 5 , for use as a fire retardant.

7. A compound according to any one of claims 1 to 5 , for use as a fire retardant in a polymeric composition or in polymer-containing composition.

8. A fire retarded polymer ic or polymer -containing composition comprising a pentabromobenzyl alkyl ether of the formula:



wherein Z, R₁ and k are as defined in claim 1.

9. A fire retarded c omposition according to claim 8 , wherein said polymer is selected from the group consisting of chlorinated polyethylene, polyethylene, polypropylene, styrene resins, high -impact polystyrene, polyvinyl chloride, acrylonitrile -butadiene-styrene copolymer,

flexible and rigid polyurethane,
unsaturated polyester resins.

epoxy resins and

10. A fire retarded composition according to claim 9
wherein said polymer is polypropylene.

11. A fire retarded composition according to claim 9
wherein said polymer is high impact polystyrene (HIPS).

12. A fire retarded composition according to claim 9
wherein said polymer is acryl -butadiene-styrene terpolymer
(ABS).

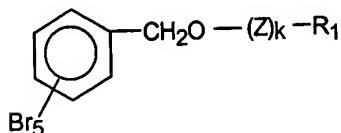
13. A fire retarded composition according to claim 9
wherein said polymer is polyurethane.

14. A fire retarded composition according to claim 8
wherein said polymer is selected from the group consisting
of polyurethane, polypropylene copolymer, high impact
polystyrene (HIPS) and acryl -butadiene-styrene terpolymer
(ABS), and said pentabromobenzyl alkyl ether is selected
from the group consisting of:

- (i) pentabromobenzyl-O-CH₂-CH₂OCH₃;
- (ii) pentabromobenzyl-O-CH₂CH₂O(CH₂)₃CH₃;
- (iii) pentabromobenzyl-O-(CH₂CH₂O)₂CH₃;
- (iv) pentabromobenzyl-O-(CH₂CH₂O)₂H;
- (v) pentabromobenzyl-O-(CH₂)₆OH;
- (vi) pentabromobenzyl-O-CH₂CH(C₂H₅)(CH₂)₃CH₃;
- (vii) pentabromobenzyl-O-CH₂CH₂OCH₂CH=CH₂;
- (viii) pentabromobenzyl-O-(C₃H₆O)₂-OCH₃
- (ix) pentabromobenzyl-O-(C₃H₆O)₂-H

15. A fire retarded composition according to any one of claims 8 to 14, further comprising a metal oxide, preferably Sb_2O_3 .

16. A process for the preparation of a pentabromobenzyl alkyl ether of the formula:



wherein Z, R_1 and k are as defined in claim 1, comprising reacting a glycol, a mono-, or di-alcohol of the formula $\text{HO}-(\text{Z})_k-\text{R}_1$, wherein Z, R_1 and k are as defined in claim 1, or the corresponding metal alcoholate thereof, with a pentabromobenzyl halide, preferably pentabromobenzyl bromide, optionally in the presence of a base.

17. A pentabromobenzyl alkyl ether according to claim 1, for use as a fire retardant, substantially as described and exemplified in the specification.

18. A process for the preparation of pentabromobenzyl alkyl ethers as defined in claim 1, substantially as described and exemplified in the specification.

19. A fire retarded polymer composition comprising pentabromobenzyl alkyl ether according to claim 1, substantially as described and exemplified in the specification.